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10/663,378	09/17/2003	Steven A. Rogers	006389.00002	2690

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BANNER & WITCOFF, LTD.
1100 13th STREET, N.W.
SUITE 1200
WASHINGTON, DC 20005-4051

EXAMINER	
MERED, HABTE	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/663,378	ROGERS, STEVEN A.
	Examiner	**Art Unit**
	Habte Mered	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 9 October 2007.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1 and 3-37 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1 and 3-37 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 17 September 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on 10/09/2007 has been entered and fully considered.

2. Claims 1 and 3-37 are pending in the instant Application. Claims 1, 15, 19, and 31 are the base independent claims. Claim 2 has been cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

(I) **Claims 1 and 3, 6, 8-23, 25-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Klassen et al (US 6, 711, 137), hereinafter referred to as Klassen in view of Barton (US Pub. No. 2002/003114 A1).

Klassen teaches system and method for analyzing and tuning a communications network.

1. Regarding **claim 1**, Klassen discloses a method of transmitting packets over an Internet Protocol (IP) or Ethernet packet-switched network **(Since the test packets are IP ping packets the communication network and stations 22 and 24 are served and connected by IP network as further illustrated in Columns 1:52-54,7:23-25, 8:34-35, 9:22, and 11:50)** , comprising the steps of: (1) transmitting a plurality of test packets over the network during a plurality of different time slots wherein each test packet has a priority level that is lower than a priority level assigned to data packets that are to be transmitted between endpoints **(Figure 1, work station 22 and target station**

22 are the endpoints) on the network, and wherein the test packets are transmitted so as to emulate data packets that are to be transmitted between the endpoints on the network; **(Columns 5:1-8 and 7:18-27)**

(2) on the basis of step (1), evaluating which of the plurality of different time slots corresponds to favorable network traffic conditions **(Column 17:50-52 – it teaches as a result of evaluating the statistics from the transmitted and received probative/test packets a network best time is evaluated in step 7);** and

(3) transmitting data packets over the network at a priority level higher than the test packets using one **(In Column 17:50-52, Klassen shows selecting the best network time)** slot evaluated in step (2). **(Columns 5:1-8 and 7:18-27 – at list of different priorities is taught and test packets higher than or lower than data packets are used and sent simultaneously with the data as suggested in 2:57-60 and 4:55-65 and the actual implementation of the test arrangement discussed in Columns 5:1-8 and 7:18-27)**

Klassen, however, fails to expressly disclose transmitting data packets over the network during a plurality of favorable different time slots.

Barton teaches the method of selecting best time slots for transmission determined by using test packets in multimedia digital networks.

Barton teaches transmitting a plurality of data packets over the network during a plurality of favorable different time slots. **(See Figures 5 and 6 and illustration in paragraphs 23 and 76 and paragraph 86 narrates the use of probe test packets to select the time slot)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Klassen's method by incorporating the step of transmitting a plurality of data packets over the network during a plurality of favorable different time slots. The invention of Klassen can be combined with Barton's because both system are based on packet switched network and utilize probe test packets to select best network times. The motivation for transmitting a plurality of data packets over the network during a plurality of favorable different time slots to correctly manage an interconnected set of physical shared digital network segments where the bandwidth between any two nodes may vary, perhaps greatly, from the bandwidth achievable between any other pair of nodes as stated in Barton's paragraph 39.

2. Regarding **claim 3**, Klassen discloses a method wherein step (2) comprises the step of evaluating packet latencies associated with the test packets. **(See Column 17:35-42 – step 5 calculates network latency and in general see Column 5:9-40)**

3. Regarding **claim 6**, Klassen discloses a method wherein step (2) comprises the step of a network endpoint transmitting node performing an evaluation of packet statistics associated with the test packets transmitted over the plurality of different time slots. **(Klassen entire invention addresses this limitation – sample references can be Figures 1-5)**

4. Regarding **claim 8**, Klassen discloses a method wherein the test packets and the data packets comprise Internet Protocol (IP) packets transmitted over a packet-switched network. **(Since the test packets are IP ping packets the communication network and stations 22 and 24 are served and connected by IP network as further**

illustrated in Klassen's Columns 1:52-54,7:23-25, 8:34-35, 9:22, and 11:50. Barton also discloses this limitation in paragraph 34)

5. Regarding **claim 9**, Klassen fails to teach a method, wherein the IP packets are scheduled for transmission within time slots within a frame that is synchronized to a clock.

Barton discloses a method, wherein the IP packets **(Paragraphs 19 and 34 and besides indicate IP is supported but Klassen already teaches supporting IP services)** are scheduled for transmission within time slots within a frame that is synchronized to a clock. **(See Paragraph 88, 101, and 102)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Klassen's method by incorporating the step of scheduling IP packets for transmission within time slots within a frame that is synchronized to a clock. The motivation to send frames synchronized to a clock is to prevent collision of frames as suggested in Barton's paragraphs 10, 88, 101, and 102.

6. Regarding **claim 10**, Klassen discloses a method, wherein the test packets are transmitted at a priority level that is lower than the data packets in step (3), but higher than other data packets containing other data transmitted on the network. **(Columns 5:1-8 and 7:18-27 – at list of different priorities is taught and test packets higher than or lower than data packets are used and sent simultaneously with the data as suggested in 2:57-60 and 4:55-65 and the actual implementation of the test arrangement discussed in Columns 5:1-8 and 7:18-27)**

7. Regarding **claim 11**, Klassen discloses a method, wherein the data packets comprise voice data. **(Column 5:6)**

8. Regarding **claim 12,** Klassen discloses a method, further comprising the step of repeating steps (1) through (3) for each side of a two-way connection between two endpoints in the network. **(See Figures 1-6)**

9. Regarding **claim 13**, Klassen discloses a method wherein the network is a packet-switched network comprising packet switches that maintain packet queues. **(Klassen teaches a packet switching system as described in Columns 1:52-54, 7:23-25, 8:34-35, 9:22, and 11:50. The queuing aspect is taught every where including in Columns 3:1-10, 5:9-25,9:47-60, 12:20-35, and more importantly in Column 16:30-57)**

10. Regarding **claim 14**, Klassen discloses a method, wherein each packet switch comprises at least two packet queues, a higher-priority queue for transmitting the data packets of step (3) and a lower-priority queue for transmitting the test packets of step (1). **(See priorities of test packet in Columns 5:1-8 and 7:18-27 and all about queuing that effectively teaches this limitation in Columns 3:1-10, 5:9-25,9:47-60, 12:20-35, and more importantly in Column 16:30-57)**

11. Regarding **claim 21**, Klassen discloses a method, wherein step (2) comprises the step of transmitting the test packets at a data rate that exceeds an expected data rate for packets that are to be transmitted between two network endpoints on the network. **(The support provided in the specification only states sending test packets at a higher or lower priorities compared to the data packets and Klassen**

adequately teaches this limitation in Columns in 2:57-60, 4:55-65, 5:1-8 and 7:18-27. Examiner assumes Applicant believes higher priority implies higher data rate and is basing support for this claim from such reasoning. At any rate even if Applicant shows support using some level of logic found in the specification , still as detailed in the rejection of claim 5, Gail teaches sending data between two end points at an optimal speed for enhancing Network utilization.)

12. Regarding **claim 33**, Klassen discloses a method wherein the data packets comprise video data. **(See Column 5:6)**

13. Regarding **claim 34**, Klassen discloses a method wherein the data packets comprise time-division multiplex (TDM) data converted into IP packets. **(See Columns 1:52-54, 7:23-25, 8:34-35, 9:22, and 11:50)**

14. Regarding **claim 15**, Klassen discloses in an Internet Protocol (IP) or Ethernet network comprising a plurality of packet switches **(Since the test packets are IP ping packets the communication network and stations 22 and 24 are served and connected by IP network as further illustrated in Columns 1:52-54, 7:23-25, 8:34-35, 9:22, and 11:50)**, a method of transmitting data packets, comprising the steps of:

(2) from a first network endpoint **(Figure 1, element 22)** transmitting node, empirically determining which of the plurality of time slots is associated with a reduced level rate of packet contention congestion with respect to an intended second network endpoint recipient node **(See Figures 2-6 and (Columns 5:1-8, 7:18-27, and 17:50-52 and entire document deals with this limitation)**

Klassen fails to teach (1) establishing a time reference frame comprising a plurality of time slots during which packets are to be transmitted across the network between two network endpoints; (3) synchronously transmitting a plurality of data packets from the first network endpoint transmitting node to the second network endpoint intended recipient node during one or more time slots empirically determined to be associated with the reduced level of packet contention congestion in step (2).

Barton teaches 1) establishing a time reference frame comprising a plurality of time slots during which packets are to be transmitted across the network between two network endpoints **(See Figures 5 and 6 and illustration in paragraphs 23 and 76 and paragraph 86 narrates the use of probe test packets to select the time slot)** ; (3) synchronously transmitting a plurality of data packets from the first network endpoint transmitting node to the second network endpoint intended recipient node during one or more time slots empirically determined to be associated with the reduced level of packet contention congestion in step (2). **(See Paragraph 88, 101, and 102)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Klassen's method by incorporating the step of 1) establishing a time reference frame comprising a plurality of time slots during which packets are to be transmitted across the network between two network endpoints; (3) synchronously transmitting a plurality of data packets from the first network endpoint transmitting node to the second network endpoint intended recipient node during one or more time slots empirically determined to be associated with the reduced level of packet contention congestion in step (2). The main motivations being namely (a) to send

frames synchronized to a clock is to prevent collision of frames as suggested in Barton's paragraphs 10, 88, 101, and 102 and (b) to correctly manage an interconnected set of physical shared digital network segments where the bandwidth between any two nodes may vary, perhaps greatly, from the bandwidth achievable between any other pair of nodes as stated in Barton's paragraph 39.

15. Regarding **claim 16**, Klassen's discloses a method wherein step (2) comprises the step of transmitting a plurality of test packets during a plurality of different time slots from the first network endpoint transmitting node to the second network endpoint intended recipient node. **(See Figures 2-6 and (Columns 5:1-8, 7:18-27, and 17:50-52 and entire document deals with this limitation)**

16. Regarding **claim 17**, Klassen's discloses a method, wherein step (2) comprises the step of transmitting the test packets using a packet priority level lower than a packet priority level used to transmit the plurality of data packets in step (3). **(Columns 5:1-8 and 7:18-27 – at list of different priorities is taught and test packets higher than or lower than data packets are used and sent simultaneously with the data as suggested in 2:57-60 and 4:55-65 and the actual implementation of the test arrangement discussed in Columns 5:1-8 and 7:18-27)**

17. Regarding **claim 18**, Klassen's disclose a method wherein step (2) comprises the step of transmitting test packets at a data rate sufficient to support a desired bandwidth in step (3). **(See Columns 16:33-55 and 18:10-35)**

18. Regarding **claim 22**, the combination of Klassen and Barton disclose a method wherein the reduced level of packet contention corresponds to zero contention.

(Klassen clearly identifies the best network time for instance in Column 17:50 and Barton guarantees zero contention by uniquely setting time slots for each end user in a reference time frame as illustrated by Barton in Figures 5 and 6 and illustration in paragraphs 23 and 76 and paragraph 86 narrates the use of probe test packets to select the time slot)

19. Regarding **claim 19**, Klassen's discloses an apparatus **(Figure 1, work station interfaces with communication network requiring it to have a network interface)** having a network interface and programmed with computer-executable instructions that, when executed, perform the steps of:

(1) transmitting a plurality of test packets at a first priority level over a network to which the apparatus computer is connected during a plurality of different time slots, wherein the test packets are transmitted at a data rate that emulates data packets that are to be transmitted between endpoints on the network **(Columns 5:1-8 and 7:18-27)**;

(2) on the basis of step (1), evaluating which of the plurality of different time slots corresponds to favorable network traffic conditions **(Column 17:50-52 – it teaches as a result of evaluating the statistics from the transmitted and received probative/test packets a network best time is evaluated in step 7)**; and

(3) transmitting data packets over the network at a second priority level using one **(In Column 17:50-52, Klassen selecting the best network time)** or more favorable time slots evaluated in step (2), wherein the second priority level is higher than the first priority level. **(Columns 5:1-8 and 7:18-27 – at list of different priorities is taught and test packets higher than or lower than data packets are used and sent**

simultaneously with the data as suggested in 2:57-60 and 4:55-65 and the actual implementation of the test arrangement discussed in Columns 5:1-8 and 7:18-27)

Klassen, however, fails to expressly disclose transmitting data packets over the network during a plurality of favorable different time slots.

Barton teaches transmitting a plurality of data packets over the network during a plurality of favorable different time slots. **(See Figures 5 and 6 and illustration in paragraphs 23 and 76 and paragraph 86 narrates the use of probe test packets to select the time slot)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Klassen's apparatus by incorporating the step of transmitting a plurality of data packets over the network during a plurality of favorable different time slots. The invention of Klassen can be combined with Barton's because both system are based on packet switched network and utilize probe test packets to select best network times. The motivation for transmitting a plurality of data packets over the network during a plurality of favorable different time slots to correctly manage an interconnected set of physical shared digital network segments where the bandwidth between any two nodes may vary, perhaps greatly, from the bandwidth achievable between any other pair of nodes as stated in Barton's paragraph 39.

20. Regarding **claim 20**, Klassen discloses an apparatus, wherein the computer executable instructions further perform the step of evaluating packet latencies of the plurality of: test packets with a second apparatus connected to the network. **(See**

Column 17:35-42 – step 5 calculates network latency and in general see Column 5:9-40)

21. Regarding **claim 23**, Klassen discloses an apparatus, wherein step (2) comprises the step of evaluating packet statistics associated with the test packets. **(Klassen entire invention addresses this limitation – sample references can be Figures 1-5)**

22. Regarding **claim 25**, Klassen discloses an apparatus wherein the packet statistics comprise packet latencies. **(See Column 17:35-42 – step 5 calculates network latency and in general see Column 5:9-40)**

23. Regarding **claim 26**, Klassen discloses an apparatus, wherein the test packets and the data packets comprise Internet Protocol (IP) packets transmitted over a packet-switched network. **(See Columns 1:52-54, 7:23-25, 8:34-35, 9:22, and 11:50)**

24. Regarding **claim 27**, the combination of Klassen and Barton discloses an apparatus wherein the IP packets are scheduled for transmission within time slots within a frame that is synchronized to a clock. **(See Paragraph 88, 101, and 102)**

25. Regarding **claim 28**, Klassen discloses an apparatus, wherein the test packets are transmitted at a priority level that is lower than the data packets in step (3), but higher than other data packets containing other data transmitted on the network. **(Columns 5:1-8 and 7:18-27 – at list of different priorities is taught and test packets higher than or lower than data packets are used and sent simultaneously with the data as suggested in 2:57-60 and 4:55-65 and the actual implementation of the test arrangement discussed in Columns 5:1-8 and 7:18-27)**

26. Regarding **claim 29**, Klassen discloses an apparatus, wherein the data packets comprise voice data. **(See Column 5:6)**

27. Regarding **claim 30**, Klassen discloses an apparatus wherein the network is a packet-switched network comprising packet switches that maintain packet queues. **(Klassen teaches a packet switching system as described in Columns 1:52-54, 7:23-25, 8:34-35, 9:22, and 11:50. The queuing aspect is taught every where including in Columns 3:1-10, 5:9-25,9:47-60, 12:20-35, and more importantly in Column 16:30-57)**

28. Regarding **claim 35**, Klassen discloses an apparatus, wherein the data packets comprise voice data. **(See Column 5:6)**

29. Regarding **claim 36**, Klassen discloses an apparatus, wherein the data packets comprise time-division multiplex (TDM) data converted into IP packets. **(See Columns 1:52-54, 7:23-25, 8:34-35, 9:22, and 11:50)**

30. Regarding **claim 31**, Klassen discloses a system comprising at least three network endpoints **(Figure 1, element 22 and 24 and in Column 8:55 Klassen shows there can be many workstation 22s)** that contend for resources in a shared packet switch **(Since the test packets are IP ping packets, the communication network and stations 22 and 24 are served and connected by IP network as further illustrated in Columns 1:52-54,7:23-25, 8:34-35, 9:22, and 11:50)**, each endpoint comprising a processor programmed with computer-executable instructions that, when executed, perform steps including **(See Figure 1, elements 32, 30, 34, 36, and 38)**:

(1) transmitting a plurality of test packets over the network during a plurality of different time slots, wherein each test packet has a priority level that is lower than a priority level assigned to data packets that are to be transmitted between endpoints on the network, and wherein the test packets are transmitted so as to emulate data packets that are to be transmitted between the endpoints on the network **(Columns 5:1-8 and 7:18-27 at list of different priorities is taught and test packets higher than or lower than data packets are used and sent simultaneously with the data as suggested in 2:57-60 and 4:55-65 and the actual implementation of the test arrangement discussed in Columns 5:1-8 and 7:18-27) **); (2) on the basis of step (1), evaluating which of the plurality of different time slots corresponds to favorable network traffic conditions **(In Column 17:50-52, Klassen selecting the best network time)**

Klassen fails to disclose synchronously transmitting data packets over the network using one or more favorable time slots evaluated in step (2).

Barton discloses synchronously transmitting data packets over the network using one or more favorable time slots evaluated in step (2). **((See Paragraph 88, 101, and 102 for synchronous transmission. See Figures 5 and 6 and illustration in paragraphs 23 and 76 and paragraph 86 narrates the use of probe test packets to select the time slot)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Klassen's system by incorporating synchronously transmitting data packets over the network using one or more favorable time slots evaluated in step (2). The main motivations being namely (a) to send frames

synchronized to a clock is to prevent collision of frames as suggested in Barton's paragraphs 10, 88, 101, and 102 and (b) to correctly manage an interconnected set of physical shared digital network segments where the bandwidth between any two nodes may vary, perhaps greatly, from the bandwidth achievable between any other pair of nodes as stated in Barton's paragraph 39.

31. Regarding **claim 32**, Klassen discloses a system wherein the processor is further programmed to perform steps including: evaluating packet statistics corresponding to the test packets transmitted as part of step (2). **(Klassen entire invention addresses this limitation – sample references can be Figures 1-5)**

32. Regarding **claim 37**, Klassen discloses a method of transmitting packets over an Internet Protocol (IP) network comprising a plurality of network switches **(Since the test packets are IP ping packets, the communication network and stations 22 and 24 are served and connected by IP network as further illustrated in Columns 1:52-54,7:23-25, 8:34-35, 9:22, and 11:50)**, comprising: (2) transmitting over a plurality of the time slots a plurality of test packets from a first endpoint on the IP network to a second endpoint on the IP network, wherein the plurality of test packets are transmitted at a first priority level **(Column 7:18-27)** and are transmitted at a data rate corresponding to an expected rate to be experienced during a subsequent communication between the first and second endpoints on the IP network **(Columns 9:15-35 and Column 10:55-60)**, (3) evaluating, at one of the first and second endpoints, packet statistics for the test packets, wherein the packet statistics are indicative of contention conditions in one or more of the plurality of network switches,

(See Figure 2 selecting routines in step 112 where the routines are described in Columns 17 and 18 and further in Figure 3, step 128 and more over in Figure 4, step 136, 138) (4) identifying one or more time slots that correspond to a low level of contention conditions **(In Column 17:50-52, Klassen shows selecting the best network time)**.

Klassen fails to disclose (1) establishing a time reference frame comprising a plurality of time slots corresponding to candidate times during which packets may be transmitted between network endpoints on the network; (5) synchronously transmitting based on the time reference frame a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data during the one or more of the time slots identified in step (4) that correspond to the low level of contention conditions in the one or more network switches, wherein the data packets are transmitted at a priority level higher than the first priority level of the test packets.

Barton discloses (1).establishing a time reference frame comprising a plurality of time slots corresponding to candidate times during which packets may be transmitted between network endpoints on the network; (5) synchronously transmitting based on the time reference frame a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data during the one or more of the time slots identified in step (4) that correspond to the low level of contention conditions in the one or more network switches, wherein the data packets are transmitted at a priority level higher than the first priority level of the test packets.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Klassen's method by incorporating the step of 1) establishing a time reference frame comprising a plurality of time slots during which packets are to be transmitted across the network between two network endpoints; (5) synchronously transmitting based on the time reference frame a plurality of data packets comprising one or more of voice data, video data, and TDM-over-IP data during the one or more of the time slots identified in step (4) that correspond to the low level of contention conditions in the one or more network switches, wherein the data packets are transmitted at a priority level higher than the first priority level of the test packets. The main motivations being namely (a) to send frames synchronized to a clock is to prevent collision of frames as suggested in Barton's paragraphs 10, 88, 101, and 102 and (b) to correctly manage an interconnected set of physical shared digital network segments where the bandwidth between any two nodes may vary, perhaps greatly, from the bandwidth achievable between any other pair of nodes as stated in Barton's paragraph 39.

(II) **Claims 4, 5, 7 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Klassen in view of Barton as applied to claim 1 above, and further in view of Gail, Jr et al (US 7, 116, 639), hereinafter referred to as Gail.

1. Regarding **claim 4**, the combination of Klassen and Barton fail to disclose a method wherein step (2) comprises the step of evaluating dropped packet rates associated with the test packets.

Gail teaches system and method for determining network discrete utilization.

Gail discloses a method wherein step (2) comprises the step of evaluating. dropped packet rates associated with the test packets. **(Columns 5:50-54, 13:30-35, and 16:45-60)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Klassen's and Barton's method by adding the step of evaluating dropped packet rates associated with the test packets. The combination of Klassen and Barton can be modified by Gail as Gail uses the same network as Klassen as shown in Figure 1 and both inventions are directed at improving network utilization for the benefit of two endpoints in the network. The motivation to determine dropped packets rates for test packet is that such an evaluation plays key factor in determining network utilization as stated by Gail in Columns 15:40-45, 5:50-54, 13:30-35, and 16:45-60.

2. Regarding **claim 5**, the combination of Klassen and Barton fail to disclose a method wherein step (1) comprises the step of transmitting the test packets at a data rate corresponding to an expected connection bandwidth.

Gail discloses a method wherein step (1) comprises the step of transmitting the test packets at a data rate corresponding to an expected connection bandwidth. **(See Column 13:53-67 and 14:1-20)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Klassen's and Barton's method by adding the step of transmitting the test packets at a data rate corresponding to an expected connection bandwidth. The combination of Klassen and Barton can be

modified by Gail as Gail uses the same network as Klassen as shown in Figure 1 and also Gail admits it is modifying Klassen's invention in Column 13:44 and both inventions are directed at improving network utilization for the benefit of two endpoints in the network. The motivation to transmit the test packets at a data rate corresponding to an expected connection bandwidth is to maintain optimal network utilization as stated by Gail in Columns 15:40-45, 13:53-67 and 14:1-20.

3. Regarding **claim 7**, the combination of Klassen and Barton disclose a method wherein step (2) comprises the step of a network endpoint ~ performing an evaluation of latencies. **(Klassen'– Column 9:10-20 and Figures 1 and 2 teach the end user at endpoint performing evaluation of latencies)**

However, the combination of Klassen and Barton fail to disclose performing an evaluation of dropped packet rates associated with the test packets transmitted over the plurality of different time slots.

Gail discloses performing an evaluation of dropped packet rates associated with the test packets transmitted over the plurality of different time slots. **(Determining the dropped packet statistics is taught by Gail in Columns 5:50-54, 13:30-35, and 16:45-60)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Klassen's and Barton's method by adding the step of performing an evaluation of dropped packet rates associated with the test packets transmitted over the plurality of different time slots. The combination of Klassen and Barton can be modified by Gail as Gail uses the same network as Klassen

as shown in Figure 1 and both inventions are directed at improving network utilization for the benefit of two endpoints in the network. The motivation to determine dropped packets rates for test packet is that such an evaluation plays key factor in determining network utilization as stated by Gail in Columns 15:40-45, 5:50-54, 13:30-35, and 16:45-60.

4. Regarding **claim 24**, the combination of Klassen and Barton fail to disclose an apparatus wherein the packet statistics comprise a dropped packet rate.

Gail discloses an apparatus wherein the packet statistics comprise a dropped packet rate. **(Columns 5:50-54, 13:30-35, and 16:45-60)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Klassen's and Barton's apparatus by adding the step of wherein the packet statistics comprise a dropped packet rate. The combination of Klassen and Barton can be modified by Gail as Gail uses the same network as Klassen as shown in Figure 1 and both inventions are directed at improving network utilization for the benefit of two endpoints in the network. The motivation to determine dropped packets rates for test packet is that such an evaluation plays key factor in determining network utilization as stated by Gail in Columns 15:40-45, 5:50-54, 13:30-35, and 16:45-60.

Response to Arguments

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Examiner as noted in the Interview Summary dated 11/29/07, the Applicant has taken the time to elaborate the intricacies and benefits of the invention. The Examiner has noted that one of the unique advantages of the invention was to prevent intermediate network nodes from changing their routing tables and policies and to give more power to the end user in selecting the best time slots in a common time reference between endpoints to determine without impacting routing schemes of intermediate nodes. However, it is now the position of the Examiner that the combination of the cited prior arts, Klassen, Barton and Gail also provide the same unique benefits by providing optimal network utilization without at all changing intermediate nodes routing schemes. Further, Klassen, Barton and Gail fully anticipate the entire Applicant's claimed invention including test packets having different priorities and being transmitted at different priorities compared to the data packet as well as synchronously transmitting between two endpoints. Further Examiner has cited new prior arts that can easily teach these claimed features.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on 571 272 7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HM
12-21-2007

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER